

What is claimed is:

1. A housing for a valve apparatus including a liquid controlling vapor flow between a canister and atmospheric conditions, the housing comprising:
 - a container defining a vapor chamber portion and a vapor flow control portion, the vapor flow control portion holding the liquid, and the vapor chamber portion being positioned above the vapor flow control portion in an upright arrangement of the valve apparatus;
 - a first partition projecting from the container into the liquid in the vapor flow control portion of the container, the first partition dividing the vapor chamber into first and second vapor sub-chambers, the first vapor sub-chamber being in vapor communication with the canister, and the second vapor sub-chamber being in vapor communication with the atmospheric conditions;
 - a second partition projecting from the container into the first vapor sub-chamber; and
 - a third partition projecting from the container into the second vapor sub-chamber.
2. The housing according to claim 1, further comprising:
 - a first port penetrating the container and providing vapor communication between the canister and the first vapor sub-chamber; and
 - a second port penetrating the container and providing vapor communication between the atmospheric conditions and the second vapor sub-chamber.
3. The housing according to claim 2, wherein the first and second partitions define a first passage providing fluid communication between the first port and the first vapor sub-chamber, and the first and third partitions define a second passage providing fluid communication between the second port and the second vapor sub-chamber.
4. The housing according to claim 1, wherein the container and the second partition define a first liquid reservoir, and the container and the third portion define a second liquid reservoir.
5. The housing according to claim 4, wherein the first and second liquid reservoirs contain the liquid in a non-upright arrangement of the valve apparatus.

6. The housing according to claim 5, wherein the non-upright arrangement comprises an inverted arrangement of the valve apparatus.
7. The housing according to claim 1, wherein the second and third partitions substantially prevent outflow of the liquid from the container in a non-upright arrangement of the valve apparatus.
8. The housing according to claim 7, wherein the non-upright arrangement comprises an inverted arrangement of the valve apparatus.
9. The housing according to claim 2, wherein the first partition comprises a first cylindrical tube surrounding an axis, and the container surrounds the first cylindrical tube.
10. The housing according to claim 9, wherein the first port is concentric with the axis, and the second port is offset from the axis.
11. The housing according to claim 9, wherein the second partition comprises a second cylindrical tube extending parallel to the axis and being disposed inside the first cylindrical tube, and the third partition comprises a third cylindrical tube extending parallel to the axis and being disposed outside the first cylindrical tube.
12. The housing according to claim 11, wherein the first partition comprises a first annular portion extending between the first cylindrical tube and the container; the second partition comprises a second annular portion extending from the second cylindrical tube, and the third partition comprises a third annular portion extending between the third cylindrical tube and the container.
13. The housing according to claim 1, wherein the vapor flow control portion comprises a semi-spherical shape.
14. A method of using a liquid for controlling vapor flow through a valve apparatus between a canister and atmospheric conditions, the method comprising:

defining a vapor flow path through a housing containing the liquid, the vapor flow path extending between first and second ports in the housing and passing through the liquid, and the housing containing the liquid in a first reservoir in an upright arrangement of the valve apparatus; and

preventing the liquid from flowing out of the first and second ports in a non-upright arrangement of the valve apparatus.

15. The method according to claim 14, wherein the preventing the liquid from flowing out comprises containing the liquid in a second reservoir.

16. The method according to claim 15, wherein the preventing the liquid from flowing out comprises returning the liquid from the second reservoir to the first reservoir when returning the valve from the non-upright arrangement to the upright arrangement.

17. The method according to claim 14, wherein the defining the vapor flow path comprises establishing a tortuous path to control outflow of the liquid from the first and second ports in the upright arrangement of the valve.

18. The method according to claim 14, wherein the defining the vapor flow path comprises disposing in the container a cylindrical tube extending from the container into the liquid.